Claims

1. The process of verifying the radiation dose delivered or to be delivered to a patient from an external beam radiation source comprising of:
    a. a external beam radiation source with an output beam directed at an image receptor;
    b. the output beam modified by all beam modifiers used in the normal course of treatment with that particular beam;
    c. a detector means for capturing an image of the output beam, integrating the total dose delivered by the output beam;
    d. the image to be captured of each output beam that is to be applied to the patient to be calibrated in units that a dose algorithm can use to calculate the dose to the patient;
    e. an electronic computer with a stored program to process the calibrated output beam images to convert the images if need be to the proper units;
    f. an electronic computer with a stored program to define the orientation of the output beam images if not all ready defined relative to the coordinate system of the radiation source;
    g. an electronic computer with a stored program to process the output beam images to remove effects of bolus used to shield contamination electrons if need be;
    h. the electronic computer with a stored program to compute the dose and dose distribution to the patient using the above input fluence derived from each output beam image that is applied to the patient;
    i. the resultant dose computed by the stored program to be displayed on a computer monitor and or printed to a printer for review by the user;
    j. the dose downloaded from the planning system to optionally be displayed along with the dose computed above in (i) above;

k. the dose difference to be computed and displayed as a distribution on the computer monitor related to the patient images used in the planning process;

l. the dose difference to be displayed as a volume histogram;

m. the standard deviation of the computed dose and intended dose to be computed and displayed;

n. the dose at specific points to be computed and displayed for comparison to the intended dose at those points;

o. the output of dose to be displayed for comparison to the intended dose distribution;

p. the above results used to verify and quality control the treatment applied or to be applied to the patient by comparing the dose computed by this process to that intended.